

## REMARKS

Reconsideration of the application identified in caption, in light of the remarks which follow, is respectfully requested.

In the Official Action, claims 1-4, 6, 7, 19 and 20 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,064,457 (*Aminaka*) in view of U.S. Patent No. 6,778,242 (*Murayama et al.*). Claims 8-11, 13, 14, 21 and 22 stand rejected under 35 U.S.C. §102(e) as being anticipated by *Aminaka* in view of U.S. Patent No. 6,034,755 (*Watanabe*) and further in view of *Murayama et al.* It appears that the Examiner intended to make this rejection under 35 U.S.C. §103. Withdrawal of these rejections is respectfully requested for at least the following reasons.

According to one aspect, independent claim 1 is directed to a liquid crystal display having a polarizing plate comprising a polarizing membrane and an optical compensatory film, said optical compensatory film having at least two optically anisotropic layers comprising first and second optically anisotropic layers, said first optically anisotropic layer being made from discotic compounds oriented in hybrid alignment, said second optically anisotropic layer consisting of a cellulose ester film, wherein the first optically anisotropic layer further contains a fluorine-containing polymer in the range of 0.005 to 8 wt.% based on the amount of components of a coating solution other than a solvent.

According to an additional aspect, independent claim 8 is directed to a liquid crystal display of reflection type.

*Aminaka* relates to a liquid crystal display of a bend alignment mode or a homogeneous alignment mode, and an ellipsoidal polarizing plate used in the liquid crystal display. Col. 1, lines 8-11.

*Aminaka* does not disclose or suggest each feature recited in independent claims 1 and 8. For example, claims 1 and 8 recite that the first optically anisotropic layer further contains a fluorine-containing polymer in the range of 0.005 to 8 wt.% based on the amount of components of a coating solution other than a solvent. Such claims further specify that the first optically anisotropic layer is made from discotic compounds oriented in hybrid alignment. *Aminaka* has no disclosure or suggestion of a first optically anisotropic layer made from discotic compounds oriented in hybrid alignment, which further contains a fluorine-containing polymer in the range of 0.005 to 8 wt.% based on the amount of components of a coating solution other than a solvent. This deficiency has been acknowledged by the Patent Office at page 4 of the Official Action.

Newly cited *Murayama et al* relates to an optical compensatory sheet comprising a cellulose acetate support and an optically anisotropic layer containing a discotic liquid crystal molecule. Col. 1, lines 15-22.

*Murayama et al* fails to cure the above-described deficiencies of *Aminaka*. In this regard, the Examiner has relied on *Murayama et al* for disclosing the use of a fluorine containing polymer at column 42, lines 6-18. Official Action at page 5. In this regard, *Murayama et al* discloses the use of a fluorine containing surface active agent at column 42, lines 6-11. However, it is respectfully but strenuously noted that *Murayama et al* fails to disclose or suggest employing such fluorine containing

surface active agent in an optically anisotropic layer **being made from discotic compounds oriented in hybrid alignment**, as is presently claimed.

In this regard, concerning such fluorine containing surface active agent, *Murayama et al* discloses the following at column 42, lines 6-11:

A cellulose acetate, a fluorine containing surface active agent or a melamine compound can be added to the orientation layer to align the discotic liquid crystal molecule along the surface of the support, wherein the average inclined angle (between the discotic planes and the planes parallel to the support) is less than 5°.

Thus, *Murayama et al* teaches that the fluorine containing surface active agent is employed in order to align the discotic liquid crystal molecule along the surface of the support, **wherein the average inclined angle between the discotic planes and the planes parallel to the support is less than 5°.**<sup>1</sup> *Murayama et al* provides no disclosure or suggestion of employing the fluorine containing surface active agent in an optically anisotropic layer being made from discotic compounds oriented in **hybrid alignment**. There is simply no disclosure or suggestion of such feature.

The Examiner has cited column 41, lines 24-34 of *Murayama et al*, for allegedly teaching the use of the fluorine containing surface active agent "to maintain consistent discotic hybrid alignment...." See Official Action at page 5. While such excerpt of *Murayama et al* discusses the general function of the orientation layer, there is no mention of the use of hybrid alignment. Moreover, as noted above, and in stark contrast with the Patent Office's assertion, *Murayama et al* explicitly teaches that the fluorine containing surface active agent is employed in order to align the

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<sup>1</sup> It is noted that such teaching concerning the alignment is similar to the disclosure in U.S. Patent No. 6,380,996 (*Yokoyama et al*) at column 12, lines 48-51. The §103 rejections set forth in the previous Official Action based on *Yokoyama et al* have been withdrawn by the Patent Office.

discotic liquid crystal molecule along the surface of the support, wherein the average inclined angle between the discotic planes and the planes parallel to the support is less than 5°.

Furthermore, it is noted that the Examiner has taken the position that *Murayama et al* discloses that "the first optically anisotropic layer" further contains the fluorine containing surface active agent. See Official Action at page 5. Respectfully, *Murayama et al* has no such disclosure. Rather, *Murayama et al* discloses that its fluorine containing surface active agent is added to **the orientation layer**, not the optically anisotropic layer. This is clear upon review of the *Murayama et al* disclosure, in which the contents of the optically anisotropic layer are described from column 35, line 30 to column 41, line 22, and the contents of the orientation layer are described from column 41, line 23 to column 42, line 28.

Quite clearly, it would not have been obvious in view of *Aminaka* and *Murayama et al*, taken alone or in combination, to arrive at the claimed first optically anisotropic layer made from discotic compounds oriented in hybrid alignment, which contains a fluorine-containing polymer in the range of 0.005 to 8 wt.% based on the amount of components of a coating solution other than a solvent.

*Watanabe* fails to cure the above-described deficiencies of *Aminaka* and *Murayama et al*. In this regard, the Examiner has relied on *Watanabe* for disclosing the use of a reflective HAN mode LCD. See Official Action at page 10. However, like the other applied art, *Watanabe* fails to disclose or suggest a first optically anisotropic layer being made from discotic compounds oriented in hybrid alignment, wherein the first optically anisotropic layer further contains a fluorine-containing

polymer in the range of 0.005 to 8 wt.% based on the amount of components of a coating solution other than a solvent.

Furthermore, it is submitted that the **surprising and unexpected** results attainable by aspects of the claimed invention are evident in view of the Declaration Pursuant to Rule 132 of Yoji Ito previously filed on September 27, 2007. Such Declaration is discussed at pages 11-12 of the Amendment filed on September 27, 2007. As noted therein, Applicants have surprisingly and unexpectedly discovered that employing a fluorine-containing polymer in the preparation of an optically anisotropic layer made from discotic compounds oriented in hybrid alignment can advantageously result in obtaining the specific desired retardation values. Such experimental data further exemplifies the non-obviousness of the claimed liquid crystal display. The applied documents, on the other hand, have no recognition or suggestion of the surprising and unexpected nature of employing the fluorine-containing polymer in the preparation of an optically anisotropic layer made from discotic compounds oriented in hybrid alignment.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited.

If there are any questions concerning this paper or the application in general,  
the Examiner is invited to telephone the undersigned.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: November 10, 2008

By:

A handwritten signature in black ink, appearing to read "R. Lee", is written over a horizontal line.

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